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September 30, 2000

US Environmental Protection Agency
David J. Newton, RPM
NH and RI Superfund Section
Office of Site Remediation and Restoration
1 Congress St., Suite 1100, (Mail Code - HBO)
Boston, MA 02114-2023

Enclosed is **Truex's** information request responses for the Peterson/Puritan, Inc. Site, Operable Unit #2, the J. M. Mills Landfill. This information is in response to your initial information request addressed to:

David Yopak
Director of EHS
Truex Incorporated
505 Central Ave.
Pawtucket, RI 02861

5023

If you have any questions, please do not hesitate to call at: 401 - 722 - 5000 ext. 307.

Very truly yours,

Dan Dyer
General Manager

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TRUEX, INC.

300 Armistice Blvd.
Pawtucket, RI 02861-2332
Tel 401.722.5023 fax 401.722.9938
Message from Dan Dyer

To: For the Record
Subject: TRUEX VITAL STASTICS
Date: November 10, 1999 updated September 18, 2000
Distribution: Operations Team, Maintenance

Truex Incorporated April 12, 1976
RI Employers #00-00865-00-1
Gen US EPA ID: RI D O40 107 690
Federal ID: 05 036 7478
Dunn & Bradstreet: 04 010 7690
Narragansett Bay Commission Wastewater Discharge Permit #B1106-021-070
Tier II Annual Inventory Form Record #28507
Toxic Chemical Release Inventory Reporting #02861TRXNC300AR

SIC 3469
Hose Fittings, Couplings & Garden Hose 3429-8620
Location 41 deg 52 min 55 sec NORTH, 71 deg 22 min 0 sec WEST
Pawtucket Plat 18, Lot 945

Light Pole Service yard Pole #6, parking lot Pole #7
Water Meter T60115323

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Information Request for
Peterson/Puritan, Inc. Superfund Site, Second Operable Unit- J.M. Mills Landfill
.....
Period being investigated: 1954 through 1986
.....

Generator Section

1. Respondent's Operations:

- a. Truex, Inc. has only one address: 300 Armistice Blvd. Pawtucket, RI 02861.
- b. On April 12, 1976 Truex, Inc was incorporated; a transfer press, metal stamping operation, at this location and has continued until the present. The processes at this plant include metal stamping, injection molding, threading, blanking, machining, heat-treating, cleaning, and etching.
- c. No changes.
- d. Truex has manufactured brass garden hose and smooth ferrules. The brass scrap from the operation is returned to the vendor for reprocessing and reuse.
- e. 95% of the raw material is CDA 260 brass strip; the remainder is carbon strip 1006 steel.
- f. Copies of material Safety Data Sheets, Appendix A
- g. The machines used in this operation are cleaned with a soap and alkaline cleaner mixed 15:1 with water. Less than 50 gallons of the concentrate were used per year.
- h. The only spills experienced were lubricating oil and coolant on the floors. This was usually washed down the drains with hot water and alkaline cleaner. In the case "speedy-dry" was used, it was placed in the Dumpster.
- i. Schematic of Truex Operation, Appendix B.

2. Truex Wastes and Waste Streams (including by-products)

- a. "Waste Survey" completed, Appendix C.
- b. "Waste Survey"
 - i. See "Waste Survey", Appendix C
 - ii. See "Waste Survey", Appendix C
 - iii. See "Waste Survey", Appendix C
 - iv. See "Waste Survey", Appendix C
 - v. See "Waste Survey", Appendix C
 - vi. See "Waste Survey", Appendix C
- c. Schematic diagram, see Appendix B

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d. Responsibility for collecting and managing each type of waste was not assigned to a specific production person in the period being investigated. The plant manager, (various titles were used) was responsible for all operations at the facility. From 1976 until 1984, Martin Jacobson, social security number and address unknown and then William K. Kantowitz, social security number 07 318 9254, deceased, were responsible for all wastes. From that date until the present Daniel P. Dyer III, 370-38-5218, 84 Main Street, Wickford, RI 02852, (401) 295-0753 was responsible for all wastes.

e. Sulfuric Acid, Hydrogen Peroxide, Sodium Hydroxide, Lacquer are used in a brightening (etching) line consisting of 11 baths. The chemicals were commingled after their useful life and flushed down the sewer. Solid wastes, paper, wood, metal turnings, "speedi-dry", garbage, packing materials, were deposited in a McCaughey returnable 30 cu yd Dumpster. The brass skeletons from the brass strip were accumulated in 55-gallon drums and shipped by truck to the vendor (brass mill) who supplied the original raw material for reprocessing and return.

3. Truex's Disposal/Treatment/Storage/Recycling/Sale of Waste (Including By-Products).

a. all individuals who currently have or those who have had responsibility for Truex wastes:

Martin Jacobson, Vice President. 1976 through 1989

William K. Kantowitz, Plant Manager, 1980 through 1982

Daniel P. Dyer III, General Manager, 1983 through present

Responsible for record retention implementation

Mark Buchan, Coordinator-EHS/Quality, 1996 through present

Organized and maintained mandated waste records

Gary Larocque, Maintenance Leadman, 1976 through present

Maintained equipment and inventory of waste and shipment records.

b. all individuals who currently have or those who have had knowledge of Truex wastes:

Martin Jacobson, Vice President. 1976 through 1979

William K. Kantowitz, Plant Manager, 1980 through 1982

Daniel P. Dyer III, General Manager, 1983 through present

Responsible for record retention implementation

Mark Buchan, Coordinator-EHS/Quality, 1996 through present

Organized and maintained mandated waste records

Gary Larocque, Maintenance Leadman, 1976 through present

Maintained equipment and inventory of waste and shipment

David Vaz, Plant Manager, 1998 through present

Responsible for all plant operations and chemical purchasing

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c. All individuals who currently have or those who have had responsibility for Truex environmental matters:

Daniel P. Dyer III, General Manager, 1983 through present

Responsible for record retention implementation

Mark Buchan, Coordinator-EHS/Quality, 1996 through present

Organized and maintained mandated waste records

d. See Appendix D

e. The dumpsters were supplied and serviced by McCaughey Standard, Inc. 65 Cedar Street Pawtucket, RI 02860-3902. They were returnable 30 cu yd dumpsters. Identified as belonging to McCaughey.

All 55-gallon drums were used to return brass skeletons to the vendor. The tops were cut out to facilitate loading. The identification labels were removed and brass identification was not initiated on individual drums. In some cases we purchased recycled drums from New England Container and others. In some cases we purchased empty 55 gallon drums from the brass vendors to ship skeletons to them. Prior use was unknown to us.

f. All daily waste, steel strapping, garbage, wood, "speedi-dry", rags, paper towels, paint and grease buckets, sweepings, was collected in two cu yd dumpsters which were emptied into returnable 30 cu ft McCaughey dumpster.

g. Truex is examining archives to determine if this information in the form of Purchase orders and bills of lading are available.

h. See Appendix B,

Brass reclaim:

American Brass 70 Sayre Street Buffalo, NY 14207

Bridgeport Brass 30 Grand Street Bridgeport, CT 06602 (203) 366-6182

Bridgeport Rolling Mills Company PO Box 818

Bridgeport, CT 06601 (out of business)

i. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.

j. Truex did not transport any waste away from its operations.

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k. Brass reclaim:
American Brass 70 Sayre Street Buffalo, NY 14207

Bridgeport Brass 30 Grand Street Bridgeport, CT 06602 (203) 366-6182

Bridgeport Rolling Mills Company PO Box 818
Bridgeport, CT 06601 (out of business)

All daily waste, steel strapping, garbage, wood, "speedi-dry", rags, paper towels, paint and grease buckets, sweepings, was picked-up by McCaughey in a returnable 30 cu ft Dumpster.

- i. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading is available.
- m. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- n. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- o. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- p. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available. The returnable 30 cu yd Dumpsters were owned by McCaughey Standard and were removed via McCaughey Dumpster On/Off Trucks.
- q. Unknown
- r. All waste was directed to the Central Landfill at Johnston, RI.
- s. Unknown during the period being investigated.
- t. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- u. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- v. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.
- w. From 1976 until 1983, spent brightening solutions and cleaners were disposed into the sewer. This included alkaline cleaners, sulfuric acid (10%) solutions, hydrogen peroxide (12%)/sulfuric acid (8%) solutions, spent water soluble lacquer solutions, waste oil, water soluble cooling solutions. This process was used for two shifts, between 20 and 24 hours per day. The flow to sewer, based on total water usage was approximately six (6) gallons per minute, which was mainly cooling, and process water.

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After 1983 waste oils were sent to various reclaimers; United Industrial Services 136 Gracy Avenue Meriden CT 06451 203.238.6745. Cleaners, sulfuric acid, hydrogen peroxide, and lacquer continued to be discharged to sewer through 1986. Pretreatment and pH adjustment began in 1985/86 for all discharges to sewer.

x. All discharges were to the combined Pawtucket sewer system, which terminated in the Blackstone Valley District Commission (now NBC)

102 Campbell Avenue

Rumford, RI 02916 telephone 401.277.2220

y. Sludges were initially sent to Pennsylvania and Canada at the initiation of our wastewater treatment program in 1986 and 1987. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.

z. Truex is examining archives to determine if this information in the form of purchase orders and bills of lading are available.

4. Truex, Inc. Identification numbers

a. General US EPA ID: RI D 040 107 690

NBC Wasterwater discharge permit: #B1106-021-070

Tier II Form Record #28507

Toxic Chemical Release Reporting #02861TRXNC300AR

SARA Title III Reporting Site #4-26-8

b. Federal Offices sent hazardous information:

United States Environmental Protection Agency (1991-1993)
Region 1

J.F. Kennedy Federal Building., ATC117
Boston, MA 02203-2211

U.S. Environmental Protection Agency (1991-present)
PO Box 70266
Washington, DC 20024-0266
attn: Toxic Chemical Release Inventory

EPCRA Reporting Center (1991-present)
PO Box 23799
Washington, DC 20026-3779
ATTN: Toxic Chemical Release Inventory

EPCRA Reporting Center (1991-present)
PO Box 3348
Merrifield, VA 22116-3348
ATTN: Toxic Chemical Release Form

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EPCRA Reporting Center
470 L'Enfant Plaza East
Suite 7103, SW
Washington, DC 20024

(1991-1993)

c. 1987 to present

d. Robert J. Barton

Hazardous Material Operations

City Of Pawtucket

155 Roosevelt Avenue, Pawtucket, RI 02860

RI State Emergency Response Commission

RI Department of Labor and Training

% Division of Occupational Safety

610 Manton Avenue Providence, RI 02909

RI Department of Environmental Management

Division of Air and Hazardous Materials

291 Promenade Street

Providence, RI 02908-5767

e. 1987 to present

f. Emergency Planning & Community Right to Know Act

Tier II

Superfund Amendment Reauthorization Act

Clean Water Act Water Permit

Comprehensive Environmental Resource Conservation and Liability Act.

g. United States Environmental Protection Agency (1991-1993)

Region 1

J.F. Kennedy Federal Building., ATC117

Boston, MA 02203-2211

U.S. Environmental Protection Agency

PO Box 70266

Washington, DC 20024-0266

attn: Toxic Chemical Release Inventory

EPCRA Reporting Center

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ATTN: Toxic Chemical Release Inventory

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EPCRA Reporting Center
PO Box 3348
Merrifield, VA 22116-3348
ATTN: Toxic Chemical Release Form

EPCRA Reporting Center
470 L'Enfant Plaza East
Suite 7103, SW
Washington, DC 20024

Robert J. Barton
Hazardous Material Operations
City Of Pawtucket
155 Roosevelt Avenue, Pawtucket, RI 02860

RI State Emergency Response Commission
RI Department of Labor and Training
% Division of Occupational Safety
610 Manton Avenue Providence, RI 02909

RI Department of Environmental Management
Division of Air and Hazardous Materials
291 Promenade Street
Providence, RI 02908-5767

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Information Request for
Peterson/Puritan, Inc. Superfund Site, Second Operable Unit- J.M. Mills Landfill
.....
Period being investigated: 1954 through 1986
.....

Truex's Legal and Financial Status Section

2. Respondent's Legal and Financial Status

- a. 38 employees
- b. 1976 thru 1981—32 persons; 1981 thru 1986— 39 persons
- c. never done business under another name
- d. Respondent objects to providing financial information at this time, because such information bars no logical relationship to the purpose of the request served upon Respondent. It is also Respondent's understanding that a request for such voluminous confidential financial information at this initial information request stage is inappropriate, and in direct conflict with the U.S. EPA's own policy and guidance for issuance of CERCLA, Section 104(e) information requests. See U.S. EPA-OECA: "Transmittal of Sample Documents for More Effective Communication in CERCLA section 104(e)(2) Information Requests," (June 30, 1995) ("a request for financial information should be contained in the general notice letter") Respondent has gathered, and will preserve such information for future disclosures, should the same ever become relevant to any lawful inquiry by EPA or another agency.
- e. N/A
- f. Truex, Inc
 - i. Incorporated April 12, 1976
 - ii. Incorporated in the state of Rhode Island
 - iii. agent: Tillinghast, Licht, Perkins, Smith, Cohen, Providence, RI
 - iv. Current officers
 - Norman M. Fain, Chairman of Board
 - Jonathan D. Fain, President
 - Herbert Malin, Treasurer
 - Victor J. Baxt, Secretary
 - v. Current directors
 - Norman M. Fain
 - Jonathan D. Fain
 - Herbert Malin
 - Victor J. Baxt

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- vi. Jonathan D. Fain
Victor J. Baxt
- vii.
Norman M. Fain, Chairman of Board
Jonathan D. Fain, President
Herbert Malin, Treasurer
Victor J. Baxt, Secretary
- viii.
Norman M. Fain
Jonathan D. Fain
Herbert Malin
Victor J. Baxt

- g. N/A
- h. N/A
- i. N/A
- j. N/A
- k. N/A
- l. N/A
- m. N/A
- n. N/A

3. Information about others

- a. A company existed during this period called Turex, Inc. in Smithfield, RI now called Uniplast that is often confused with Truex by suppliers and vendors. Uniplast 401-568-2567
- b. Unknown
- c. N/A

4. Compliance with This Request

- a.
 - i. Gary Larocque, Maintenance from 1976 through present.
Mark Buchan, EHS, 1996 through present
 - ii. above
 - iii. above
 - iv. current
 - v. all records are believed to be at 300 Armistice Blvd
 - vi. purchasing office, EHS office
 - vii. same

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DECLARATION

I declare under penalty of perjury that I am authorized to respond on behalf of

TIZUEX, INC and that the foregoing is complete, true, and correct.
Respondent

Executed on 9/13, 2000


Signature

DANIEL P. DYER III
Type Name

CEO MGR
Title [if any]

APPENDIX A

MATERIAL SAFETY DATA SHEET

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EXTINGUISH MEDIA..... Water fog. Chemical foam. Dry chemical powder.
Carbon dioxide
FOR FIRE..... Wear self-contained breathing apparatus when fire
fighting in confined space.
UNUSUAL FIRE HAZARD..... Combustion will produce carbon monoxide and
asphyxiants.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE.... 8hr. Time weighted permissible exposure 5.0 MG/m3.
Government regulation.
OVER EXPOSURE EFFECTS.... No acute effects expected to twice exposure limit.
FIRST AID PROCEDURES..... Inhalation: None normally required
Skin: Wash with soap and water until no odor.
Eye: Flush with water. If irritation persists, obtain
medical assistance
Ingestion: Practically non-toxic. Vomiting is not
recommended. Get medical assistance if required.

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Stable
CONDITIONS TO AVOID..... Contact with strong oxidizers
INCOMPATIBLE MATERIALS... Strong oxidizers
DECOMPOSITION PRODUCTS... Carbon monoxide and asphixiants.
HAZARDOUS POLYMERIZATION. Will NOT occur.
POLYMERIZATION AVOID..... N/A

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL Contain spill. Advise EPA and State and Local
agencies if required. Absorb on inert material.
WASTE DISPOSAL METHOD.... Follow Federal, State and local regulations. Do not
flush to drain or storm sewer. Contract authorized
disposal service.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... None under normal conditions. NIOSH approved suppli
air respirator when exposed to vapors from heated
material.
VENTILATION..... Ventilate as needed to maintain compliance with
environmental exposure limit.
PROTECTIVE GLOVES..... Oil resistance gloves recommended when prolonged ski
contact cannot be avoided.
EYE PROTECTION..... Splash proof chemical safety goggles

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MATERIAL SAFETY DATA SHEET

Neilcut 333

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OTHER PROTECTIVE EQUIPMENT..... If contact is unavoidable, wear appropriate oil impervious clothing. Launder soiled clothing before reuse.

HANDLING AND STORAGE..... Storage per NFPA class IIIB liquid. Wash thoroughly after handling.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... N/A

DOT SHIPPING NAME..... Petroleum lubricating oil

REPORTABLE QUANTITY (RQ). Per local regulation.

UN NUMBER..... N/A

NA #..... N/A

PACKAGING SIZE.....

FOOT NOTES

REFERENCES

The information presented herein has been compiled from sources considered to dependable, however, NEIL makes no warranty, expressed or implied, of merchantability or fitness for a particular purpose, regarding the accuracy of such data or the results.

MATERIAL SAFETY DATA SHEET

Peter J. Puritan
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IDENTIFICATION

Name

Hydrogen Peroxide (30 to 52% peroxide)

Grade

ALBONE* 35, 50, 35CG, 50CG, M;
KASTONE* B, 41;; PERONE* 30, 35, 50;
TYSUL* S, WW

Chemical Family

Inorganic peroxide

Synonyms

WW35, WW50
Peroxide

Formula

H_2O_2

CAS Name

Hydrogen Peroxide

CAS Registry No.

7722-84-1

I.D. Nos./Codes

NIOSH Registry No. MX0900000

Manufacturer/Distributor

E. I. du Pont de Nemours & Co.(Inc.)

Product Information and Emergency

Phone (800)441-7515 or
(302)774-9898

Address

Wilmington, DE 19898

Transportation Emergency Phone

CHEMTREC (800)424-9300

*Reg. U.S. Pat. & Tm. Off., Du Pont Company. ALBONE®, KASTONE®, PERONE® and TYSUL® Hydrogen Peroxide are made only by Du Pont.

PHYSICAL DATA (See page 5 for specific grades)

Boiling Point, 760 mm Hg

106° to 114°C (222 to 237°F)

Melting Point

-26 to 52°C (-15 to 62°F)

Specific Gravity

1.1 to 1.2

Vapor Pressure

18 to 24 mmHg at 30°C (86°F)

Solubility in Water

100%

% Volatiles by Vol.

50 to 70 at 21°C (70°F)

Form

Liquid

Appearance

Clear

Color

None

Odor

Slightly pungent

pH Information

Apparent pH = 3.3 at 30% to 1.8 at 50%

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0648-0032

HAZARDOUS COMPONENTS

<u>Material(s)</u>	<u>Approximate % Hydrogen Peroxide</u>
PERONE® 30	30
ALBONE® 35, 35CG, PERONE'® 35, TYSUL® WW35	35
KASTONE® 41	40
ALBONE® 50, 50CG, M, KASTONE® B, PERONE® 50, TYSUL® WW50	50

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HAZARDOUS REACTIVITY

Instability

Unstable with heat or contamination; may result in dangerous pressures (see "Decomposition", below).

Incompatibility

Incompatible with cyanides, hexavalent chromium compounds, nitric acid, potassium permanganate, reducing agents.

Decomposition

Contamination from any source may cause rapid decomposition, oxygen gas release and dangerous pressures. May react dangerously with rust, dust, dirt, iron, copper, heavy metals or their salts (such as mercuric oxide or chloride), and with organic materials (especially vinyl monomers).

Polymerization

Will not occur.

FIRE AND EXPLOSION DATA

Flash Point

Will not burn.

Flammable Limits in Air, % by Vol.

Will not burn, but decomposition will release oxygen which in a confined space, will increase explosive limits and burning rate of flammable vapors.

Fire and Explosion Hazards

Strong oxidizer. Evaporation or drying of this material on clothing or combustible may cause fire. Contact with flammable liquids or vapors may cause immediate fire or explosion, especially if heated, or may result in a delayed detonation.

Extinguishing Media

Flush away with water

Special Fire Fighting Instructions

Flood with water. Cool tanks or containers. Wear full protective clothing, including chemical splash goggles and self-contained breathing apparatus in emergencies.

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HEALTH HAZARD INFORMATION

Exposure Limits

OSHA 8-hour Time Weighted Average (TWA), ACGIH TLV®-TWA = 1 ppm, 1.4 mg/m³.

Significant Routes and Effects of Exposure

May cause eye burns; effects may be delayed. Short term exposure causes skin irritation. Longer exposure causes irritation, blisters or burns. If swallowed, it may cause a sudden evolution of oxygen, which can cause injury by distension of the esophagus or stomach. Local internal bleeding may result. Inhalation of vapor or mist may cause irritation of nose and throat.

Safety Precautions

Do not get in eyes. Avoid contact with skin. Avoid contact with combustible materials. Drying of this product on clothing or combustible materials may cause fire. Avoid contamination from any including metals, dust and organic materials. Never use pressure to empty drums - container is not a pressure vessel. Wash thoroughly after handling.

First Aid

In case of contact: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water. Remove and wash contaminated clothing and shoes promptly and thoroughly.

If swallowed: Give water freely to dilute the stomach contents. Call a physician. (Note to Physician: Insert a gastric tube to prevent increased pressure that may result from the rapid evolution of oxygen.)

If inhaled: Remove patient to fresh air. If irritation of throat or nose apparent, refer patient to a physician.

PROTECTION INFORMATION

Ventilation

Good general ventilation should be provided to keep peroxide concentrations below exposure limits.

Personal Protective Equipment

Have available and wear as appropriate: hard hat with brim; chemical splash goggles; full length face shield; neoprene, butyl or vinyl rubber boots and gloves; clean DACRON® polyester fiber outer clothing; chemical suit with hood and breathing air supply. Avoid cracked, suede or other porous shoes.

Other

Protective skin creams offer no protection from hydrogen peroxide and should not be worn.

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DISPOSAL INFORMATION

Spill, Leak or Release

Comply with federal, state, and local regulations on reporting releases of wastes. Flood area with water and drain to approved chemical sewer to wastewater treatment system. May be destroyed with sodium metabisulfite, sodium sulfite or sodium thiosulfate (1.9 lbs SO₂ equivalent per lb of peroxide) after diluting to 5-10% peroxide.

Waste Disposal

Comply with federal, state and local regulations. If approved, may be diluted and drained to sewer to waste treatment plant; may be drained through scrap metal (iron, copper, etc.) pit to reduce peroxide concentration.

SHIPPING INFORMATION

Transportation

DOT Hazard Class.*: Oxidizer**

IMO Class.: 5:1

DOT Shipping Name*:

UN No.: 2014

Hydrogen Peroxide Solution (8 to 52% peroxide)

Shipping Containers

Railroad tank cars, tank trucks, drums, and sample bottles.

Storage Conditions

Store in properly vented container or in approved bulk storage facilities. Do not block vent in bung cap. Keep container out of sun and away from heat, sparks, and flame. Do not add any other product to container. Do not store with reducing agents, combustible or flammable materials, or heavy metal salts. Have water source available for diluting. Never return unused peroxide to container - dilute with plenty of water and discard. Rinse empty drums thoroughly with clean water before discarding. Protect drums from weather.

***49 CFR 172.101, Hazardous Materials Table**

**Hydrogen Peroxide in concentration of 52% or below is not regulated as a hazardous material by DOT when shipped in tank cars or tank trucks. (49 CFR 173.266e)

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Physical Properties: (continued from page 1)

	Hydrogen Peroxide Concentration		
	30%	35%	50%
Boiling Point - 760 mm Hg, °C	106	108	114
°F	222	226	237
Melting Point - °C	-26	-33	-52
°F	-15	-27	-62
Specific Gravity - 20°C (68°F)	1.112	1.133	1.196
Vapor Pressure - 30°C (86°F), mm Hg	24	23	18
% Volatiles (H ₂ O)	70	65	50

For further information see:

Du Pont "Hydrogen Peroxide (H₂O₂) Solutions Storage and Handling Bulletin."
Du Pont Data Sheet, "ALBONE® M Peroxygen Compound."
Du Pont Data Sheet, "TYSUL® WW Hydrogen Peroxide."
Du Pont Plating Product Bulletin No. 20, "Treating Cyanide Zinc and Cadmium Rinsewaters with KASTONE® Peroxygen Compound."
See also, National Fire Protection Association's "Fire Protection Guide on Hazardous Materials."

Date Revised: 3/85

Person Responsible: J. C. Watts, Du Pont Co., C&P Dept., Chestnut Run
Wilmington, DE 19898, (302) 999-4946

E-70675

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0648-0036



Du Pont Chemicals

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DEC 13 1991



Revised 15-Aug-91

Printed 16-Oct-91

Sulfuric Acid, 77 to 100%

MATERIAL IDENTIFICATION

Corporate Number	DU000051	DISTRIBUTED BY AXTON CROSS
Manufacturer/Distributor	Du Pont 1007 Market Street Wilmington, DE 19898	
Phone Numbers	Product Information Transport Emergency Medical Emergency	1-800-441-9442 CHEMTREC: 1-800-424-9300 1-800-441-3637
Grade	77 to 100 % TECHNICAL	
Chemical Family	MINERAL ACID	
CAS Name	SULFURIC ACID	
CAS Number	7664-93-9	
Formula	H2SO4	
Molecular Weight	98.08	
TSCA Inventory Status	Reported/Included	
NFPA Ratings	Health: 3 Flammability: 0 Reactivity: 2 Water Reactive	
NPCA-HMIS Ratings	Health: 3 Flammability: 0 Reactivity: 2 Personal Protection rating to be supplied by user depending on use conditions.	

COMPONENTS

Material	CAS Number	Percent
*SULFURIC ACID	7664-93-9	

(continued)

COMPONENTS (continued)

60 DEG TECHNICAL	<i>Peterson Petroleum</i>	77.7
66 DEG TECHNICAL	<i>11.9</i>	93.2
1.835 ELECTROLYTE	<i>00 II</i>	93.2
98% TECHNICAL		98
99% TECHNICAL		99
100% TECHNICAL		100
<hr/>		
WATER	7732-18-5	0-22

* Regulated as a Toxic Chemical under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

PHYSICAL DATA

Boiling Point	193 to 327°C (380 to 621°F) at 760 mm Hg.
Vapor Pressure	<0.3 mm Hg at 25°C (77°F) <0.6 mm Hg at 38°C (100°F)
Vapor Density	3.4
Melting Point	-35 to 11°C (-31 to 51°F)
Evaporation Rate	Less than 1
Water Solubility	100 WT %
pH	Less than 1
Odor	Odorless
Form	Oily; clear to turbid liquid
Color	Colorless to light gray

GRADE	BOILING PT.		MELTING PT.		SPECIFIC GRAVITY
	DEG C	DEG F	DEG C	DEG F	
60 DEG TECHNICAL	193	380	-12	10	1.706
66 DEG TECHNICAL	279	535	-35	-31	1.835
1.835 ELECTROLYTE	279	535	-35	-31	1.835
98% TECHNICAL	327	621	-2	29	1.844
99% TECHNICAL	310	590	4	40	1.842
100% TECHNICAL	274	526	11	51	1.839

(continued)

Peterson Puritan
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OUT

HAZARDOUS REACTIVITY

Instability	Stable, but reacts violently with water and organic materials with evolution of heat.
Decomposition	Releases sulfur dioxide at extremely high temperatures.
Polymerization	Polymerization will not occur.

Incompatibility : Vigorous reactions with water; alkaline solutions; metals, metal powder; carbides; chlorates; fulminates; nitrates; picrates; strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides.

FIRE AND EXPLOSION DATA

Flash Point	Will not burn
Fire and Explosion Hazards	Reacts with most metals, especially when dilute, to give flammable, potentially explosive hydrogen gas. Follow appropriate National Fire Protection Association (NFPA) codes.
Extinguishing Media	Use media appropriate for surrounding material. Use water spray to cool containers exposed to fire; do not get water inside containers.
Special Fire Fighting Instructions	Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Generates heat upon addition of water, with possible spattering. Wear full protective clothing. Runoff from fire control may cause pollution. Neutralize run-off with lime, soda ash, etc., to prevent corrosion of metals and formation of hydrogen gas. Wear self-contained breathing apparatus if fumes or mists are present.

HEALTH HAZARD INFORMATION

Causes severe burns to eyes, skin, and all body tissue. Eye damage may be permanent. Destruction of tissue may result from direct chemical reaction with tissue, from thermal burns, and from dehydration (removal of water) of the tissue.

ANIMAL DATA:

Inhalation 1-hour LC50: 347 ppm in rats
Oral LD50 : 2140 mg/kg in rats

The concentrated compound is corrosive to the skin and eyes of animals. By ingestion it is moderately toxic in animals causing corrosion of mucosal surfaces. Toxic effects described in animals from single exposures by inhalation include respiratory irritation. Animal testing indicates that this compound does not have carcinogenic, mutagenic,

(continued)

HEALTH HAZARD INFORMATION (continued)

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embryotoxic, or reproductive effects.

HUMAN HEALTH EFFECTS:

Human health effects of overexposure to the liquid by skin or eye contact may cause eye corrosion with corneal or conjunctival ulceration; or skin burns or ulceration. Ingestion of the liquid may cause severe burns to the mucous membranes of the mouth and esophagus. Repeated or prolonged contact with mists may cause eye irritation with discomfort, tearing or blurring of vision; or skin irritation with discomfort or rash. Human health effects of overexposure by inhalation may include irritation of the upper respiratory passages; or erosion of dental surfaces. Higher exposures by inhalation may lead to temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath; or possibly modest initial symptoms followed in hours by severe shortness of breath, requiring prompt medical attention.

Although two epidemiology studies did suggest a possible association between sulfuric acid exposure and respiratory tract tumors, conclusions from these studies are very limited because of significant deficiencies. In one study, for example, only a small number of workers were sampled, and there was exposure to other materials including diethyl sulfate, an IARC and NTP carcinogen. In the other study there was exposure to other acids, plus the smoking histories of the workers were ignored in the development of the study conclusion. Based on the overall weight of evidence from all human and chronic animal studies, we conclude that no causal relationship between sulfuric acid exposure and respiratory tract tumors has been shown.

Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

Carcinogenicity

None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

Exposure Limits

Sulfuric Acid, 77 to 100%

AEL* (Du Pont)

TLV (ACGIH)

PEL (OSHA)

1 mg/m³ - 8 & 12 Hr. TWA

1 mg/m³ - 8 Hr TWA

STEL: 3 mg/m³

1 mg/m³ - 6 Hr TWA

* AEL is Du Pont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

Safety Precautions

Avoid breathing vapors or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

Keep containers closed. Do not add water to contents while in container because of violent reaction.

(continued)

Peterson Puritan
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OV II

FIRST AID

INHALATION

If inhaled, remove to fresh air immediately and have patient lie down and remain quiet. Apply artificial respiration if breathing has stopped. Give oxygen if breathing is difficult. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Give large quantities of water. Call a physician. Do not neutralize the acid. Never give anything by mouth to an unconscious person.

SKIN OR EYE CONTACT

In case of contact, immediately (within seconds) flush eyes or skin with plenty of water (preferably cold water) for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

While the patient is being transported to a medical facility apply compresses of iced water. If medical treatment must be delayed, immerse the affected area in iced water. If immersion is not practical, compresses of iced water can be applied. Avoid freezing tissues.

Notes to Physician

Continued washing of the affected area with cold or iced water will be helpful in removing the last traces of sulfuric acid. Creams or ointments should not be applied before or during the washing phase of the treatment.

PROTECTION INFORMATION

Generally Applicable Control Measures and Precautions

Good general ventilation should be provided to keep vapor and mist concentrations below the exposure limits.

Personal Protective Equipment

Have available and wear as appropriate for exposure conditions when handling containers or operating equipment containing sulfuric acid: chemical splash goggles; full-length face shield/chemical splash goggle combination; acid-proof gauntlet gloves, apron, and boots; long sleeve wool, acrylic, or polyester clothing; acid proof suit and hood; and appropriate NIOSH/MSHA respiratory protection. In case of emergency or where there is a strong possibility of considerable exposure, wear a complete acid suit with hood, boots, and gloves. If acid vapor or mist are present and exposure limits may be exceeded, wear appropriate NIOSH/MSHA respiratory protection.

DISPOSAL INFORMATION

Aquatic Toxicity

The 48-hour TLm in flounder is 100-300 ppm.

(continues)

Peterson Furman
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DISPOSAL INFORMATION (continued)

Spill, Leak, or Release

NOTE: Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Superfund reportable discharge = 1000 lbs.

Stop flow if possible. Review "Fire and Explosion Hazards" and "Safety Precautions" before proceeding with clean up. Use appropriate protective equipment during clean up. Soak up small spills with dry sand, clay or diatomaceous earth. Dike large spills, and cautiously dilute and neutralize with lime or soda ash, and transfer to waste water treatment system. Prevent liquid from entering sewers, waterways, or low areas. Comply with Federal, State, and local regulations on reporting releases. The EPA reportable discharge is 1000 lbs.

Waste Disposal

Cleaned-up material may be a RCRA Hazardous Waste on disposal. Do not flush to surface water or sanitary sewer system. Comply with Federal, State, and local regulations. If approved, neutralize and transfer to waste treatment system.

SHIPPING INFORMATION

DOT

Proper Shipping Name	SULFURIC ACID*
Hazard Class	CORROSIVE MATERIAL
UN/NA No.	UN 1830
DOT Labels(s)	CORROSIVE
DOT Placard	CORROSIVE

DOT/IMO

Proper Shipping Name	SULPHURIC ACID
Hazard Class	CORROSIVE MATERIAL, 8
UN No.	1830
Special Information	IMO LABEL: CORROSIVE
Packaging Group	II
Reportable Quantity	1000 lbs.
Shipping Containers	Tank Car Tank Truck Steel Drums - 55-gallon stainless steel *If material is shipped in quantities greater than 1000 lbs. per container, the Proper Shipping Name is RQ SULFURIC ACID.

(continued)

STORAGE CONDITIONS

*Peterson Puritan
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OV II*

Keep out of sun and away from heat, sparks, and flame. Keep container tightly closed and (drum) closure up to prevent leakage. Loosen closure carefully. Relieve internal pressure when received and at least weekly thereafter. Do not use pressure to empty. Be sure closure is securely fastened before moving container. Do not wash out container or use it for other purposes; replace closure after each withdrawal and return it with empty container.

TITLE III HAZARD CLASSIFICATIONS

Acute	Yes
Chronic	Yes
Fire	No
Reactivity	Yes
Pressure	No

LISTS:

Extremely Hazardous Substance	-Yes
CERCLA Hazardous Substance	-Yes
Toxic Chemical	-Yes

ADDITIONAL INFORMATION AND REFERENCES

For further information, see Du Pont Sulfuric Acid "Storage and Handling Bulletin".

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS:

W. J. Brock
Du Pont Chemicals
P. O. Box 80709, Chestnut Run
Wilmington, DE 19880-0709
302-999-4946

Indicates updated section.

End of MSDS

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MATERIAL SAFETY DATA SHEET

COOK'S INDUSTRIAL LUBRICANTS
5 NORTH STILES STREET
LINDEN, N. J. 07036

REVISION DATE
24-NOV-92

DATE ISSUED
10-DEC-92

IDENTIFICATION AND EMERGENCY INFORMATION

COOK'S PRODUCT NAME:
COOK'S COOL 5008

COOK'S PRODUCT #:
H2L211G

CHEMICAL NAME:
Mixture of lard oil, non-ionic
emulsifiers and petroleum oil

CAS #'S:
Mixture

PRODUCT APPEARANCE AND ODOR:
Amber liquid, fatty odor

CHEMICAL FAMILY:
Petroleum hydrocarbon

SYNONYMS:
Soluble Oil

EMERGENCY TELEPHONE:
(201) 862-2500

COMPONENTS AND HAZARD INFORMATION

COMPONENTS: W/W HAZARD DATA (TLV, LD50, LC50, ETC.):

Petroleum-based lubricating oil
CAS #'S 64742-53-6 or
64742-52-5

TLV 5 mg./meter cubed
(as an oil mist)

Proprietary additives

n/e

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

Health	Flammability	Reactivity	Basis
1	1	0	Recommended by Exxon

TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION:

ICC: Compound or lubricant. Metal cutting, drawing or drilling.
Dry, liquid or paste. NOI

EMERGENCY FIRST AID

EYE CONTACT:

If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT:

In case of skin contact, remove contaminated clothing and wash skin thoroughly with soap and water.

INHALATION:

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EMERGENCY FIRST AID

Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen if available. If overexposure to oil mist, remove from further exposure until excessive oil mist condition subsides.

INGESTION:

If ingested, do not induce vomiting. Call a physician immediately.

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM):

160°C (320°F) Test method: COC

AUTOIGNITION TEMPERATURE:

N/E

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION:

Health	Flammability	Reactivity
1	1	0

FLAMMABLE OR EXPLOSIVE LIMITS (approximate percent by volume in air):

Estimated values: lower 1% upper 6%

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type product, depending on size or potential size of fire and circumstance related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Eighth Edition (1984):

Use water spray, dry chemical, foam, or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water froth may be used to flush spills away from exposure. Minimize breathing gases, vapor, fumes, or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

n/a

"EMPTY" CONTAINER WARNING:

Empty containers retain residue (liquid or vapor) and can be dangerous. DO NOT PRESSURIZE, WELD, CUT BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged, and returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with government regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

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HEALTH AND HAZARD INFORMATION

EXPOSURE LIMIT FOR TOTAL PRODUCT:

5 mg/cubic meter for oil mist in air

BASIS:

OSHA Regulation 29 CFR 1910.1000

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which vary from person to person. As a precaution, exposure to liquids, vapors, mists, or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure):

Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria. Product contacting the eye may cause irritation.

Product has a low order of oral and dermal toxicity. Possible aspiration hazard. Induced vomiting may cause aspiration of product into the lungs. (See Emergency First Aid Section).

PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE:

Wide range

VAPOR PRESSURE:

< 0.1 @ 38°C/100°F

SPECIFIC GRAVITY (25°C/25°C):

(WATER = 1)

< 1.0

VAPOR DENSITY (AIR = 1):

> 8

MOLECULAR WEIGHT:

Wide range

PERCENT VOLATILE BY VOLUME:

Negligible

EVAPORATION RATE @ 1 ATM. AND 25°C

(77°F) (n-BUTYL ACETATE = 1):

< 1.0

SOLUBILITY IN WATER @ 1 ATM. and 25°C

(77°F):

Forms emulsion

POUR, CONGEALING OR MELTING POINT:

n/e

FREEZING POINT:

n/e

REACTIVITY

This product is stable and will NOT react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

Fumes, smoke, carbon monoxide, oxides of sulfur, and other decomposition products, in case of incomplete combustion.

CONDITIONS TO AVOID:

Open flames.

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TOXICITY

ORAL (Acute)	LD 50 > 5 g/kg (total body weight)
DERMAL (Acute)	LD 50 > 3.16 g/kg (total body weight)
EYE	N/E
INHALATION (Acute)	N/E
CHRONIC, SUBCHRONIC, ETC.	N/E

Medical Conditions Aggravated by Exposure: Unknown

This product does NOT contain any ingredients identified as carcinogenic by IRAC, NTP, or OSHA.

SARA Section 313 Status: This material is not known to contain any chemicals on the SARA Section 313 list at a concentration greater than 1.0 percent or carcinogenic chemical on that list at a concentration greater than 0.1 percent.

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Keep product out of sewers and watercourses by diking or impounding. Absorb with sand or inert material. Sweep or scoop up and remove. Prevent spread of spill. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with local regulations

WASTE DISPOSAL METHOD: (Consult federal, state, or local authorities for proper disposal procedures.)

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste site or facility.

PROTECTION AND PRECAUTIONS

VENTILATION: (Always maintain below permissible exposure limits.)

Use local exhaust to capture vapor, mist or fumes, if necessary. Provide greater than 60 feet per minute hood face velocity for confined spaces. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air.

RESPIRATORY PROTECTION: (Use only NIOSH approved equipment.)

Normally not needed at ambient temperatures. Use supplied air respiratory protection in confined or enclosed spaces, if needed. Use filter, dust, fume, or mist respirator type under misting conditions. Use can or cartridge gas or vapor respirator type under conditions exceeding TWA standard.

PROTECTIVE GLOVES:

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION:

Use splash goggles or face shield when eye contact may occur.

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OTHER PROTECTIVE EQUIPMENT:

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or

PROTECTION AND PRECAUTIONS

repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS:

Keep containers closed when not in use. Do not handle near heat, sparks, flame or strong oxidants.

PERSONAL HYGIENE:

Minimize breathing vapor, mist, or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse; discard if oil-soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

PREPARED BY: PETER KONOPI MANAGER OF QUALITY ASSURANCE

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, SELLER MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

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COOK'S INDUSTRIAL LUBRICANTS
5 NORTH STILES STREET
LINDEN, N. J. 07036

REVISION DATE
27-OCT-89

DATE ISSUED
09-FEB-90

IDENTIFICATION AND EMERGENCY INFORMATION

COOK'S PRODUCT NAME:
Cook Clean 101

COOK'S PRODUCT #:
E41871A

CHEMICAL NAME:
Water-based cleaning fluid

CAS #'S:
Mixture

PRODUCT APPEARANCE AND ODOR:
Clear liquid, orange fragrance

CHEMICAL FAMILY:
Degreaser

SYNONYMS:

EMERGENCY TELEPHONE:
1-(201) 862-2500

COMPONENTS AND HAZARD INFORMATION

COMPONENTS:	CAS NO. OF COMPONENTS	APPROXIMATE CONCENTRATION
Water	7732. 18. 5	> 60%
Solvent cleaner	5989. 27. 5	< 15%
Silicate cleaning agent	6834. 92. 0	< 15%
Sequestering agents	64. 02. 8	< 4%
poly(oxy-1,2-ethanediyl)	9016. 45. 9	< 15%

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):

Health	Flammability	Reactivity	BASIS
-	-	-	Recommended by Exxon

EXPOSURE LIMIT FOR TOTAL PRODUCT BASIS
NOT AVAILABLE

TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION:

ICC: Compound or lubricant. Metal cutting, drawing or drilling.
Dry, liquid or paste. NOI

EMERGENCY FIRST AID

EYE CONTACT:

If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT:

In case of skin contact, remove contaminated clothing and wash skin

EMERGENCY FIRST AID

thoroughly with soap and water.

INHALATION:

N/A

INGESTION:

If ingested, call a physician immediately.

Peterson Portland
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FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM):

N/A

AUTOIGNITION TEMPERATURE:

N/A

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION:

Health	Flammability	Reactivity
0	0	0

FLAMMABLE OR EXPLOSIVE LIMITS (approximate percent by volume in air):

Estimated values: N/A

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type product, depending on size or potential size of fire and circumstance related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

n/a

HEALTH AND HAZARD INFORMATION

EXPOSURE LIMIT FOR TOTAL PRODUCT:

N/A

BASIS:

--

VARIABILITY AMONG INDIVIDUALS:

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which vary from person to person. As a precaution, exposure to liquids, vapors, mists, or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure):

Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Product contacting the eye may cause irritation.

Product has a low order of acute oral and dermal toxicity.

PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

PHYSICAL DATA

BOILING RANGE:

Wide range

VAPOR PRESSURE:

n/e

SPECIFIC GRAVITY (25°C/25°C):

(WATER = 1)

> 1.0

VAPOR DENSITY (AIR = 1):

n/e

MOLECULAR WEIGHT:

Wide range

PERCENT VOLATILE BY VOLUME:

Approx. 75 %

EVAPORATION RATE @ 1 ATM. AND 25°C

(77°F) (n-BUTYL ACETATE = 1):

> 1.0

SOLUBILITY IN WATER @ 1 ATM. and 25°C

(77°F):

Soluble

POUR, CONGEALING OR MELTING POINT:

n/e

FREEZING POINT:

n/e

REACTIVITY

This product is stable and will NOT react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

Fumes, smoke, carbon monoxide and other decomposition products, in case of incomplete combustion.

CONDITIONS TO AVOID:

Open flames.

TOXICITY

ORAL (Acute)	N/E
DERMAL (Acute)	N/E
EYE	N/E
INHALATION (Acute)	N/E
CHRONIC, SUBCHRONIC, ETC.	N/E

Medical Conditions Aggravated by Exposure: Unknown

This product does NOT contain any ingredients identified as carcinogenic by IRAC, NTP, or OSHA.

SARA Section 313 Status: This material is not known to contain any chemicals on the SARA Section 313 list at a concentration greater than 1.0 percent or carcinogenic chemical on that list at a concentration greater than 0.1 percent.

SPILL OR LEAK PROCEDURES

Peterson Periton
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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Absorb with suitable absorbent. For large spills, absorb with suitable absorbant and collect for disposal.

WASTE DISPOSAL METHOD: (Consult federal, state, or local authorities for proper disposal procedures.)

Assure conformity with applicable disposal regulations.

Cook Clean 101 will rapidly penetrate and lift a wide range of petroleum, animal and vegetable based oils, fats and greases, which are then easily removed by water rinsing. The oily contaminants in used Cook Clean 101 solutions, left in a still tank or holding pond after cleaning, will rise to the surface and separate. This oil may be removed by top skimming. The remaining bottom layer is then a clean, biodegradable, reusable liquid cleaning solution which can be flushed to the sewer if no longer needed.

PROTECTION AND PRECAUTIONS

VENTILATION: (Always maintain below permissible exposure limits.)

Use local exhaust to capture vapor, mist or fumes, if necessary.

RESPIRATORY PROTECTION: (Use only NIOSH approved equipment.)

Normally not needed at ambient temperatures.

PROTECTIVE GLOVES:

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION:

Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT:

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS:

Keep containers closed when not in use. Do not handle near heat, sparks, flame or strong oxidants. DO NOT MIX WITH NITRITES OR PRODUCTS WHICH CONTAIN NITRITES.

PERSONAL HYGIENE:

Minimize breathing vapor, mist, or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

PREPARED BY: Dave Townsend Product Safety Manager

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR

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PROTECTION AND PRECAUTIONS

TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED
HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY
HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

Peterson Fulham
11/9
OV II

Product Name: REGULAR MINERAL SPIRITS
Product Code No: 11005

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Issue Date: 12/01/89

SECTION II - EMERGENCY AND FIRST AID PROCEDURES*****EMERGENCY*****

Have physician call LOS ANGELES POISON
INFORMATION CENTER (24 hrs) (800) 356-3129

EYE CONTACT:

IF IRRITATION OR REDNESS DEVELOPS, MOVE VICTIM AWAY FROM EXPOSURE AND INTO FRESH AIR. FLUSH EYES WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN CONTACT:

REMOVE CONTAMINATED SHOES AND CLOTHING AND CLEANSE AFFECTED AREA(S) THOROUGHLY BY WASHING WITH MILD SOAP AND WATER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, SEEK MEDICAL ATTENTION.

INHALATION (BREATHING):

IF RESPIRATORY SYMPTOMS DEVELOP, MOVE VICTIM AWAY FROM SOURCE OF EXPOSURE AND INTO FRESH AIR. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN ARTIFICIAL RESPIRATION. IF BREATHING DIFFICULTIES DEVELOP, OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSONNEL. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION (SWALLOWING):

ASPIRATION HAZARD: DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH BECAUSE THIS MATERIAL CAN ENTER THE LUNGS AND CAUSE SEVERE LUNG DAMAGE. IF VICTIM IS DROWSY OR UNCONSCIOUS, PLACE ON THE LEFT SIDE WITH THE HEAD DOWN. IF POSSIBLE, DO NOT LEAVE VICTIM UNATTENDED. SEEK MEDICAL ATTENTION.

Peterson Peritan
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SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY**EYE CONTACT:**

THIS MATERIAL MAY CAUSE MILD EYE IRRITATION. DIRECT CONTACT WITH THE LIQUID OR EXPOSURE TO VAPORS OR MISTS MAY CAUSE STINGING, TEARING AND REDNESS.

SKIN CONTACT:

THIS MATERIAL MAY CAUSE MILD SKIN IRRITATION. PROLONGED OR REPEATED CONTACT MAY CAUSE REDNESS, BURNING, AND DRYING AND CRACKING OF THE SKIN. NO HARMFUL EFFECTS HAVE BEEN DEMONSTRATED IN SKIN ABSORPTION STUDIES. PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS MATERIAL.

INHALATION (BREATHING):

THIS MATERIAL IS EXPECTED TO HAVE A LOW DEGREE OF TOXICITY BY INHALATION. BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE IRRITATION OF THE NOSE AND THROAT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). RESPIRATORY SYMPTOMS ASSOCIATED WITH PRE-EXISTING LUNG DISORDERS (E.G., ASTHMA-LIKE CONDITIONS) MAY BE AGGRAVATED BY EXPOSURE TO THIS MATERIAL.

INGESTION (SWALLOWING):

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT AND SIGNS OF NERVOUS SYSTEM DEPRESSION (E.G., HEADACHE, DROWSINESS, DIZZINESS, LOSS OF COORDINATION AND FATIGUE). ASPIRATION HAZARD - THIS MATERIAL CAN ENTER LUNGS DURING SWALLOWING OR VOMITING AND CAUSE LUNG INFLAMMATION AND DAMAGE.

COMMENTS:

THIS MATERIAL HAS NOT BEEN IDENTIFIED AS A CARCINOGEN BY NTP, IARC OR OSHA. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE (SOMETIMES REFERRED TO AS SOLVENT OR PAINTERS' SYNDROME). INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THIS PRODUCT MAY BE HARMFUL OR FATAL. THIS PRODUCT IS SOMETIMES USED AS A DRY-CLEANING

Product Name: REGULAR MINERAL SPIRITS
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SECTION III - HEALTH HAZARDS/ROUTES OF ENTRY

SOLVENT. RETAINED SOLVENT IN ABSORBENT CLOTHING (E.G. SHOULDER PADS) THAT REMAINS IN CONTACT WITH THE SKIN FOR PROLONGED PERIODS HAS CAUSED SEVERE SKIN DAMAGE. CARE MUST BE TAKEN TO ENSURE THAT GARMENTS CLEANED WITH SOLVENTS ARE COMPLETELY DRY BEFORE BEING WORN.

SECTION IV - SPECIAL PROTECTION INFORMATION**VENTILATION:**

IF CURRENT VENTILATION PRACTICES ARE NOT ADEQUATE TO MAINTAIN AIRBORNE CONCENTRATIONS BELOW THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I), ADDITIONAL VENTILATION OR EXHAUST SYSTEMS MAY BE REQUIRED. WHERE EXPLOSIVE MIXTURES MAY BE PRESENT, ELECTRICAL SYSTEMS SAFE FOR SUCH LOCATIONS MUST BE USED.

RESPIRATORY PROTECTION:

THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED THE ESTABLISHED EXPOSURE LIMITS (SEE SECTION I). DEPENDING ON THE AIRBORNE CONCENTRATION, USE A RESPIRATOR OR GAS MASK WITH APPROPRIATE CARTRIDGES AND CANNISTERS (NIOSH APPROVED, IF AVAILABLE) OR SUPPLIED AIR EQUIPMENT.

PROTECTIVE GLOVES:

THE USE OF GLOVES IMPERMEABLE TO THE SPECIFIC MATERIAL HANDLED IS ADVISED TO PREVENT SKIN CONTACT AND POSSIBLE IRRITATION.

EYE PROTECTION:

APPROVED EYE PROTECTION TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

IT IS SUGGESTED THAT A SOURCE OF CLEAN WATER BE AVAILABLE IN THE WORK AREA FOR FLUSHING EYES AND SKIN. IMPERVIOUS CLOTHING SHOULD BE WORN AS NEEDED.

SECTION V - REACTIVITY DATA**REACTIVITY:**

STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.

CONDITIONS AFFECTING REACTIVITY:

AVOID ALL POSSIBLE SOURCES OF IGNITION (SEE SECTIONS VII AND VIII).

INCOMPATIBLE MATERIALS:

THIS PRODUCT IS INCOMPATIBLE WITH STRONG ACIDS OR BASES, OXIDIZING AGENTS AND SELECTED AMINES.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION MAY YIELD CARBON DIOXIDE AND CARBON MONOXIDE. DO NOT BREATHE SMOKE OR FUMES. WEAR APPROPRIATE PROTECTIVE EQUIPMENT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

NONE KNOWN

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SECTION VI - SPILL AND LEAK PROCEDURES

HIGHWAY OR RAILWAY SPILLS

Call CHEMTREC (800) 424-9300 Cont. U.S.
(Collect) (202) 483-7616 from Alaska & Hawaii

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

COMBUSTIBLE. KEEP ALL SOURCES OF IGNITION AWAY FROM SPILL/RELEASE. STAY UPWIND AND AWAY FROM SPILL/RELEASE. ISOLATE HAZARD AREA AND LIMIT ENTRY TO AUTHORIZED PERSONNEL. STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED TREATMENT DRAINAGE SYSTEMS AND NATURAL WATERWAYS. DIKE FAR AHEAD OF SPILL FOR LATER RECOVERY OR DISPOSAL. SPILLED MATERIAL MAY BE ABSORBED INTO AN APPROPRIATE ABSORBENT MATERIAL. NOTIFY FIRE AUTHORITIES AND APPROPRIATE FEDERAL, STATE AND LOCAL AGENCIES. IMMEDIATE CLEANUP OF ANY SPILL IS RECOMMENDED.

EPA REPORTABLE QUANTITY:

NONE

WASTE DISPOSAL METHOD:

DISPOSE OF PRODUCT IN ACCORDANCE WITH LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

KEEP CONTAINER(S) TIGHTLY CLOSED. USE AND STORE THIS MATERIAL IN COOL, DRY, WELL VENTILATED AREAS AWAY FROM HEAT AND ALL SOURCES OF IGNITION. POST AREA "NO SMOKING OR OPEN FLAME." BOND AND GROUND ALL EQUIPMENT WHEN TRANSFERRING FROM ONE VESSEL TO ANOTHER. STORE ONLY IN APPROVED CONTAINERS. KEEP AWAY FROM ANY INCOMPATIBLE MATERIALS (SEE SECTION V). PROTECT CONTAINER(S) AGAINST PHYSICAL DAMAGE. THE USE OF EXPLOSION-PROOF EQUIPMENT IS RECOMMENDED AND MAY BE REQUIRED (SEE APPROPRIATE FIRE CODES). DO NOT ENTER CONFINED SPACES SUCH AS TANKS OR PITS WITHOUT FOLLOWING PROPER ENTRY PROCEDURES SUCH AS ASTM D-4276. OUTDOOR OR DETACHED STORAGE IS PREFERRED. INDOOR STORAGE SHOULD MEET OSHA STANDARDS AND APPROPRIATE FIRE CODES. THE USE OF RESPIRATORY PROTECTION IS ADVISED WHEN CONCENTRATIONS EXCEED ANY ESTABLISHED EXPOSURE LIMITS (SEE SECTIONS I AND IV). WASH THOROUGHLY AFTER HANDLING. DO NOT WEAR CONTAMINATED CLOTHING OR SHOES. USE GOOD PERSONAL HYGIENE PRACTICE. "EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY SHIPPED TO THE SUPPLIER OR A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS. BEFORE WORKING ON OR IN TANKS WHICH CONTAIN OR HAVE CONTAINED THIS PRODUCT, REFER TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ANSI Z49.1, AND OTHER GOVERNMENTAL AND INDUSTRIAL REFERENCES PERTAINING TO CLEANING, REPAIRING, WELDING, OR OTHER CONTEMPLATED OPERATIONS.

Peter J. Furman
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SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

NFPA	HEALTH HAZARD:	1	HAZARD RANKING	
HAZARD	FLAMMABILITY:	2	0 = LEAST	FLASH POINT
CLASS	REACTIVITY:	0	1 = SLIGHT	
	OTHER:		2 = MODERATE	101 F (TCC)
			3 = HIGH	
			4 = EXTREME	
			* = CHRONIC HEALTH EFFECTS	

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UNION OIL CO.

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SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

HMIS HEALTH HAZARD: 1
HAZARD FLAMMABILITY: 2
CLASS REACTIVITY: 0
PPE:

LOWER EXPLOSIVE LIMIT (% VOL.)

0.7

UPPER EXPLOSIVE LIMIT (% VOL.)

6.0

EXTINGUISHING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, HALON, FOAM OR WATER SPRAY IS RECOMMENDED.

UNUSUAL FIRE & EXPLOSION HAZARDS:

THIS MATERIAL IS COMBUSTIBLE AND MAY BE IGNITED BY HEAT, SPARKS, FLAME OR OTHER SOURCES OF IGNITION (e.g. STATIC ELECTRICITY, PILOT LIGHTS, MECHANICAL/ELECTRICAL EQUIPMENT). VAPORS MAY TRAVEL CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION WHERE THEY MAY IGNITE, FLASHBACK OR EXPLODE. VAPOR/AIR EXPLOSION HAZARD INDOORS/OUTDOORS OR IN SEWERS. VAPORS ARE HEAVIER THAN AIR AND MAY ACCUMULATE IN LOW AREAS. IF CONTAINER IS NOT PROPERLY COOLED, IT MAY EXPLODE IN THE HEAT OF A FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:

WEAR APPROPRIATE PROTECTIVE EQUIPMENT INCLUDING RESPIRATORY PROTECTION AS CONDITIONS WARRANT (SEE SECTION IV). STOP SPILL/RELEASE IF IT CAN BE DONE WITHOUT RISK. MOVE UNDAMAGED CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. WATER SPRAY MAY BE USEFUL IN MINIMIZING OR DISPERSING VAPORS AND COOLING EQUIPMENT EXPOSED TO HEAT AND FLAME. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION IX - PHYSICAL DATA

***UNLESS OTHERWISE NOTED, VALUES ARE AT
20 C/68 F AND 760 mm Hg/1 atm.

<u>APPROX BOILING POINT</u>	<u>(AIR = 1) VAPOR DENSITY</u>	<u>(N-BUTYL ACETATE = 1) EVAPORATION RATE</u>	<u>% VOLATILE</u>
310-405 F	4.9	0.12	100

<u>% SOLUBILITY IN WATER</u>	<u>VAPOR PRESSURE (mm Hg)</u>
<0.1	3.1

SPECIFIC GRAVITY

0.788 (60 F/60 F)

APPROX. BULK DENSITY (lb/gal)

6.56 (60 F)

APPEARANCE

CLEAR, LITTLE IF ANY COLOR, LIQUID

ODOR

CHARACTERISTIC

SECTION X - PRECAUTIONARY WARNING

CAUTION! COMBUSTIBLE. ASPIRATION HAZARD IF SWALLOWED. CAN ENTER LUNGS AND CAUSE DAMAGE. KEEP AWAY FROM HEAT, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION (E.G., STATIC ELECTRICITY, PILOT LIGHTS OR MECHANICAL/ELECTRICAL EQUIPMENT). DO NOT TASTE OR SWALLOW. FIRST AID: DANGER - ASPIRATION HAZARD. IF SWALLOWED DO NOT INDUCE VOMITING. CALL A PHYSICIAN. IN CASE OF CONTACT, FLUSH EYES OR SKIN WITH PLENTY OF WATER.

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SECTION XI - DOCUMENTARY INFORMATION

ISSUE DATE: 12/01/89 PRODUCT CODE NO. 11005
PREV. DATE: 09/22/89 PREV. PROD. CODE NO. 1005
MSDS NO: 6299 PREV. MSDS NO: 853

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DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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FOR FURTHER INFORMATION, CONTACT YOUR LOCAL SALES OFFICE

ATLANTA	(404) 934-0343 (800) 633-2362	LOS ANGELES	(714) 228-4700
BALTIMORE (Outside MD)	(301) 355-2737 (800) 638-7676	MIAMI (FL Only) (FL Only)	(305) 634-2411 (800) 621-3841 (800) 282-0537
BIRMINGHAM (Outside AL) (Inside AL)	(205) 995-9776 (800) 328-1611 (800) 328-1610	NASHVILLE (TN Only)	(615) 320-5474 (800) 325-7685
CHARLOTTE (NC Only) (SC, GA, VA)	(704) 588-2633 (800) 532-6103 (800) 438-2968	NY/NJ (NY Only)	(201) 574-9890 (800) 526-4376
CHICAGO	(708) 257-9300	PHILADELPHIA CONSHOHOCKEN	(215) 753-1903 (215) 828-1010
CINCINNATI	(513) 422-0176	NEW ENGLAND	(401) 438-7240 (800) 523-0725
CLEVELAND	(216) 425-4600	SAN FRANCISCO/ OAKLAND AREA	(415) 562-1976
DALLAS/FT. WRTH	(214) 298-8233	TWIN CITIES	(612) 227-8020
DETROIT	(313) 772-0870	WICHITA	(316) 838-3335
HOUSTON	(713) 643-3517		
KANSAS CITY	(816) 231-7600		

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Material Safety Data Sheet**BRASSES, COMMERCIAL BRONZES**Page: 1
Rev. Date
01/15/93PMX Industries, Inc.
5300 Willow Creek Dr SW
Cedar Rapids, IA 52404Company Contact: David Ozolins
Telephone Number: (319)368-7700 ext 1635Emergency Contact: Jim Howes
Emergency Phone Number: (319)368-7700 1420*Peterson Peritour*
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*OU II***SECTION #1 - IDENTIFICATION**

Product: BRASSES, COMMERCIAL BRONZES

Product Code: P6335

Chemical Family: 200 SERIES COPPER ALLOYS

SECTION #2 - CHEMICAL COMPONENTS

Component: COPPER

CAS Number: 7440-50-8

Percent of Mixture: 60.0 to 97.0

Exposure Limits: ACGIH TLV-TWA 1 mg/m3

Dust & Mists, as Cu. Fume is 0.2 mg/m3

OSHA FINAL PEL-TWA 1 mg/m3

as Cu dusts and mists

OSHA FINAL PEL-TWA 0.1 mg/m3

as Cu fume

Component: ZINC

CAS Number: 7440-66-6

Percent of Mixture: 3.0 to 40.0

Exposure Limits: ACGIH TWA 5 mg/m3

Oxide Fume

OSHA - PEL TWA - STEL 5 - 10 mg/m3

Oxide Fume

Component: LEAD

CAS Number: 7439-92-1

Percent of Mixture: < 0.04

Exposure Limits: ACGIH TLV-TWA 0.15 mg/m3

Inorganic dusts & fumes, as Pb.

OSHA ACTION LEVEL 30 µg/m3

as Metallic, Inorganic & Organic Pb Soap

OSHA PEL-TWA 50 µg/m3

as Metallic, Inorganic & Organic Pb Soap

SECTION #3 - PHYSICAL DATA

Melting Point: >1200°C

Vapor Pressure: n/a

Vapor Density (Air=1): n/a

Packing Density: n/a

Solubility (H2O): n/a

Percent Volatiles: n/a

Evaporation Rate: n/a

pH: n/a at a Concentration of: n/a

Appearance

Pink/gold to pink/yellow colored lustrous metal

SECTION #4 - FIRE FIGHTING & EXPLOSION DATA

Flash Point: n/a°C

Autoignition: n/a°C

Lower Explosive Limit (%): none

Upper Explosive Limit (%): none

BRASSES, COMMERCIAL BRONZES

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SECTION #4 - FIRE FIGHTING & EXPLOSION DATA Continued...

Extinguishing Media

Use extinguishing media appropriate to the surrounding material.

Special Fire Fighting Instructions

Brass products in the solid state present no fire or explosion hazard, but may react with strong acids, bases or oxidizing agents.

SECTION #5 - EXPOSURE EFFECTS and FIRST AID

First Aid - Inhalation

If exposed to excessive levels of metal fumes, remove to fresh air. Seek medical attention.

First Aid - Skin

Wash with soap and water

First Aid - Eyes

Flush with water for at least 15 minutes.

Miscellaneous Toxicological Information

Brass products in the natural state do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing and grinding may release fumes and/or dusts which may present health hazards if TLV's are exceeded.

Routes of entry:

Inhalation:	Y	Ingestion:	Y
Eye contact:	N	Skin:	N

Acute Toxicity:

Short term exposure to fumes/dust may produce irritation of eyes and respiratory system. Inhalation of high concentration of freshly formed oxide fumes of zinc and copper may cause metal fume fever characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenza-like symptoms.

Chronic Toxicity:

Inhalation or ingestion of lead particles may result in lead-induced systemic toxicity. Symptoms of lead poisoning include abdominal cramps, anemia, muscle weakness and headache. Prolonged exposure may cause behavioral changes, kidney damage, CNS damage and reproductive effects.

Lethal Dose or Concentration of Product or Its Components:

Element	LD50	LD50
Copper	LD50	N/D
Tin	LD50	N/D
Zinc	LD50	N/D
Lead	LD50	100 mg/kg

SECTION #6 - REACTIVITY & POLYMERIZATION

Stability: stable

Conditions to Avoid (Stability)

Mercury, ammonia, acetylene acids
contact with strong acids, bases or oxidizing agents

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Material Safety Data Sheet**BRASSES, COMMERCIAL BRONZES**Page: 3
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01/15/93**SECTION #6 - REACTIVITY & POLYMERIZATION Continued...****Hazardous Decomposition Products**

Metallic dust or fumes may be produced during welding, burning, grinding and machining. Refer to ANSI Z49.1

Hazardous Polymerization: n/a

SECTION #7 - SPILL, LEAK, & DISPOSAL PROCEDURES**Steps to be Taken in The Event of Spills, Leaks, or Release**

N/A

Waste Disposal Methods

According to Local, State and Federal Regulations.

SARA Title III Notifications and Information**SARA Title III - Section 313 Supplier Notification:**

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent of Mixture
7440-50-8	COPPER	60.0 - 97.0
7440-66-6	ZINC	3.0 - 40.0
7439-92-1	LEAD	0.04

This information must be included on all MSDSs that are copied and distributed for this material.

SECTION #8 - SPECIAL PROTECTIVE MEASURES**Ventilation**

Local exhaust ventilations should be utilized when welding, burning, sawing, brazing, grinding or machining when exposure exceeds TLV's.

Eye Protection

Safety glasses or goggles should be utilized as required by exposure. Other protective equipment should be utilized as required by the welding standards.

Respiratory Protection

NIOSH/MSHA - Approved Dust and Fume respirator should be used to avoid excessive inhalation of particulates when exposure exceeds TLV's.

SECTION #9 - SPECIAL PRECAUTIONS - STORAGE & HANDLING**Storage & Handling Conditions**

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod.

*Peterson P. J. 11.9
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M a t e r i a l S a f e t y D a t a S h e e t**BRASSES, COMMERCIAL BRONZES****Page: 4**
Rev. Date
01/15/93**DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

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MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: LIQUID CAUSTIC SODA 50%

SECTION I.

SUPPLIER'S NAME: GEORGE MANN & CO., INC.
 ADDRESS: P.O. BOX 9066
 PROVIDENCE, RI 02940

EMERGENCY TELEPHONE NUMBER: 401-781-5600
 INFORMATION TELEPHONE NUMBER: 401-781-5600
 EFFECTIVE DATE: 1 March 1990
 CHANGES: Sections II, V, VIa, VIb, VII, VIII, and IX

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SECTION II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

COMPONENTS	CAS NO.	OSHA PEL	ACGIH TLV	% OPTIONAL	OTHER LIMITS
Sodium Hydroxide	1310-73-2	2 mg/m3	2 mg/m3	50	
Water	7732-18-5			50	

HAZARD CLASSIFICATION: 0--4 /0=MINIMUM/4= SEVERE (HMIS system)
 Health: 3 Flammability: 0 Reactivity: 1

SECTION III. PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 143 deg C SPECIFIC GRAVITY (H₂O=1): 1.54 @ 15.6 deg C

VAPOR PRESSURE (mmHg): 13 @ 60 deg C

FREEZING POINT: 12.1 deg C (54 deg F) EVAPORATION RATE: NA
 (Butyl Acetate=1)

VAPOR DENSITY(AIR=1): NA

SOLUBILITY IN WATER: Complete pH of 7.5% soln: 14.0

APPEARANCE AND ODOR: Colorless viscous liquid with no distinct odor

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SECTION IV. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: NA

FLAMMABLE LIMITS: LEL: NA
UEL: NA

EXTINGUISHING MEDIA: Water spray, foam, carbon dioxide or dry chemical may be used where this product is stored.

SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective clothing. Avoid direct contact with water as this can cause a violent exothermic reaction.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

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SECTION V. REACTIVITY DATA

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Avoid direct contact with water as this can cause a violent exothermic reaction.

INCOMPATIBLE MATERIALS: Avoid contact with aluminum, tin, zinc and alloys containing these metals. Do not mix with strong acids without dilution and agitation. Avoid contact with leather, wool, acids, organic halogen and organic nitro compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not know.

SECTION VIa. HEALTH HAZARD DATA

ROUTES OF ENTRY

Skin Contact: Destructive to tissue. Produces severe burns. Irritation may not be immediately observed.

Inhalation: Dust, mists or spray may damage upper respiratory tract and lung tissue and produce chemical pneumonia, depending on severity.

Ingestion: Can cause severe burns and tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach.

HEALTH HAZARDS

Acute/Chronic: Acute: Corrosive to all body tissues with which it comes in contact. The effect of local dermal exposure may consist of multiple areas of superficial destruction of skin or of primary irritant dermatitis. Inhalation may result in varying degrees of irritation or damage to the respiratory tract tissues and an increase in susceptibility to respiratory illness. Chronic: No known chronic effects.

SECTION VIA. HEALTH HAZARD DATA (Continued)

CARCINOGENICITY

NTP7: Not a carcinogen

IARC Monographs: Not a carcinogen

OSHA Regulated: Not a carcinogen

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SIGNS AND SYMPTOMS OF OVEREXPOSURE: Corrosive to all body tissues. The severity of damage and the extent of irreversibility increases with the length of contact time. Prolonged contact with even dilute solutions can cause a high degree of tissue destruction. The latent period following skin contact during which no irritation is evident varies from several hours at a 4% solution to 3 minutes for a 25 to 50% solution.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY OVEREXPOSURE: None known.

SECTION VIB. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes for 15 minutes with large amounts of water. Forcibly hold eyelids apart to ensure flushing of entire surface. Get Medical Attention.

SKIN CONTACT: Immediately wash area with large amounts of water for at least 15 minutes. Remove contaminated clothing and footwear. Wash clothing before reuse and discard footwear which cannot be decontaminated. Get Medical Attention.

INHALATION: Remove to fresh air. If breathing is difficult, have a trained person administer oxygen. Get Medical Attention.

INGESTION: Do Not Induce Vomiting. Give large quantities of water or milk. If spontaneous vomiting occurs, keep airway clear. Do not give liquids to an unconscious person. Get Medical Attention.

SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Stop leak and contain spill. Remove spill using a vacuum truck. Neutralize remaining material with dilute acid and flush with water followed by a liberal covering of sodium bicarbonate. Place cleanup materials in an approved container, label and remove to a safe place pending disposal.

WASTE DISPOSAL METHOD: The materials resulting from cleanup may be hazardous waste. Consult federal, state and local regulations for disposal.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Do not get into eyes, on skin, or on clothing. Use chemical goggles, face shield, rubber gloves and protective clothing. Avoid breathing dust, mist or spray. Decontaminate clothing and equipment with soap and water.

OTHER PRECAUTIONS: Keep out of contact with aluminum, tin, zinc and alloys containing these metals.

Petera P. A. A.

SECTION VIII. SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION:

VENTILATION: Special ventilation is not required under normal use.

LOCAL EXHAUST: Use local exhaust ventilation where dust, mist or spray may be generated. Where carbon dioxide or other reaction products are generated, special ventilation may be required.

MECHANICAL: Use NIOSH/MSHA approved respirators when dust, mist or spray are present.

PROTECTIVE GLOVES: Chemical resistant gloves should be worn. Natural and butyl rubber are suggested.

EYE PROTECTION: Wear chemical safety goggles plus a full face shield

OTHER PROTECTIVE EQUIPMENT: Impervious protective clothing and chemically resistant boots should be worn to minimize skin contact.

WORK/HYGENIC PRACTICES: Wash contaminated clothing with soap and water and dry before reuse. Showers and eyewash stations should be accessible in work areas.

SECTION IX: ADDITIONAL INFORMATION:

SCA INVENTORTY: Listed.

SARA TITLE III HAZARD CATEGORIES: Health - Immediate (Acute)
Physical - Reactive Hazard

DOT PROPER SHIPPING NAME: Sodium Hydroxide, Liquid
DOT HAZARD CLASS: Corrosive Material
DOT ID NUMBER: UN 1824
DOT HAZARDOUS SUBSTANCE: RQ 1000 lbs.

Returnable containers must be shipped in compliance with federal, state, and DOT regulations. All residual caustic soda should be removed from containers prior to shipment or disposal.

The information contained herein is furnished without warranty of any kind. Users are responsible for proper use and disposal of this product and the safety and health of employees and customers.

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MATERIAL SAFETY DATA SHEET
CLEPO 444-N

AUGUST 1983

PAGE 1 OF 2

***** SECTION 01 IDENTIFICATION *****

INFO FURNISHED BY..... FREDERICK GUMM CHEM CO. INC.
ADDRESS..... 538 FOREST ST KEARNY NJ 07032
CHEMICAL NAME/SYNONYMS... CLEPO 444-N
HAZARD CLASS..... CORROSIVE SOLID NOS
CHEMICAL FAMILY..... CAUSTIC CLEANER
EMERGENCY PHONE #..... 201-991-4174 OR 313-644-5626
FORMULA..... PROPRIETARY

***** SECTION 02 PHYSICAL DATA *****

BOILING POINT(DEG F)..... NA
VAPOR PRESSURE(mmHg)..... NA
VAPOR DENSITY(AIR=1)..... NA
SOLUBILITY IN WATER..... COMPLETE TO 32 OZ/GAL
SPECIFIC GRAVITY(H2O=1)... NA
% VOLATILE BY VOLUME..... NA
EVAPORATION RATE(H2O=1)... NA
APPEARANCE & ODOR..... OFF WHITE POWDER

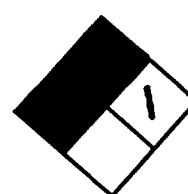
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***** SECTION 03 FIRE AND EXPLOSION DATA *****

FLASH POINT..... NONE
EXTINGUISHING MEDIA..... NA
SPECIAL FIRE FIGHTING PROCEDURES
NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS
NONE
NFPA HAZARD CLASSIFICATION..... HEALTH HAZARD(BLUE) 3
FLAMMABILITY(RED) 0
REACTIVITY(YELLOW) 1

***** SECTION 04 REACTIVITY DATA *****

STABILITY..... STABLE
CONDITIONS TO AVOID... NA
INCOMPATIBILITY(MATERIALS TO AVOID)
STRONG ACIDS
HAZARDOUS DECOMPOSITION PRODUCTS
NONE EXPECTED
HAZARDOUS POLYMERIZATION. WILL NOT OCCUR
CONDITIONS TO AVOID... NA



Clepo 444-N
CHEMICAL
OWNER _____ DATE _____

***** SECTION 05 HAZARDOUS COMPONENTS *****

PAINTS, PRESERVATIVES, & SOLVENTS NOT APPLICABLE
ALLOYS AND METALLIC COATINGS NOT APPLICABLE

HAZARDOUS COMPONENT	% BY WEIGHT	TLV(Mg/M3)
CAUSTIC SODA	28	2

***** SECTION 06 SPILL LEAK AND DISPOSAL PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
SWEEP UP AND/OR FLUSH TO WASTE DISPOSAL AREA. WATCH FOR SLIPPERY CONDITIONS

WASTE DISPOSAL METHOD
NEUTRALIZE TO LOCALLY ACCEPTABLE pH. DEPENDING ON USAGE AND LOCALITY.
MAY ALSO REQUIRE PRECIPITATION OF HEAVY METALS. THEN DUMP TO DRAIN

0648-0068

***** SECTION 07 HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE (CALCULATED) 7.14 (Mg/M3)

EFFECTS OF OVEREXPOSURE

CORROSIVE-WILL BURN SKIN AND EYES ... HARMFUL IF SWALLOWED

EMERGENCY AND FIRST AID PROCEDURES

REMOVE CONTAMINATED CLOTHING AND SHOES. FLUSH EFFECTED AREA WITH
PLENTY OF WATER (FOR EYES, HOLD EYELIDS OPEN AND FLUSH WITH WATER
FOR AT LEAST 15 MINUTES). IF SWALLOWED DO NOT INDUCE VOMITING
GET MEDICAL ATTENTION

***** SECTION 08 SPECIAL HANDLING PROCEDURES *****

RESPIRATORY PROTECTION(SPECIFY TYPE)

FILTER OR DUST TYPE RESPIRATOR WHEN HANDLING POWDER

PROTECTIVE GLOVES..... RUBBER OR NEOPRENE

EYE PROTECTION..... CHEMICAL SAFETY GOGGLES AND/OR FACE SHIELD

OTHER PROTECTIVE EQUIPMENT

DEPENDING ON LOCAL CONDITIONS, RUBBER BOOTS AND APRON MAY BE NEEDED

***** SECTION 09 SPECIAL PRECAUTIONS *****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

KEEP DRY. DO NOT STORE WITH STRONG ACIDS. CONTAINER MUST NOT BE
USED FOR ANY OTHER PURPOSE. KEEP TIGHTLY CLOSED

OTHER PRECAUTIONS

DISSOLVES WITH THE LIBERATION OF MUCH HEAT. MAY SPLATTER, DISSOLVE WITH CARE

THE INFORMATION HEREIN IS BASED ON TECHNICAL DATA THAT IS BELIEVED TO
BE RELIABLE. IT IS INTENDED FOR USE BY PERSONS HAVING TECHNICAL SKILL
AND AT THEIR OWN DISCRETION AND RISK. SINCE CONDITIONS OF USE ARE
OUTSIDE OUR CONTROL, WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND
ASSUME NO LIABILITY IN CONNECTION WITH THE USE OF THIS INFORMATION.

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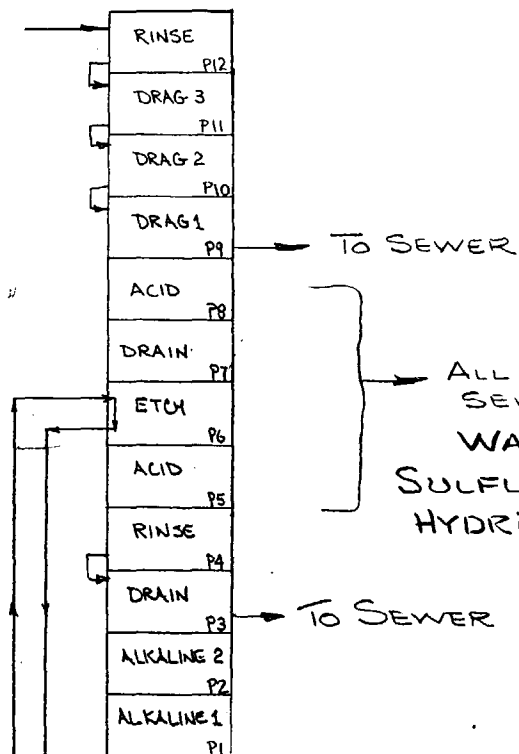
2GPM

ROTARY CLEANER

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DATE	SYM	REVISION RECORD	AUTH	DR.	CK.

TO SEWER



TO SEWER

ALL TANKS DUMPED TO
SEWER ONCE A WEEK.
WASTE STREAM INCLUDES
SULFURIC ACID, ALKALINE, LACQUER
HYDROGEN PEROXIDE

TO SEWER

COOLING WATER RECYCLE

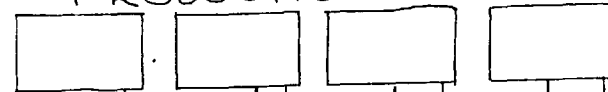
FURNACE 1

FURNACE 2

PUMP

COOLING
TOWER

PRODUCTION MACHINES



SPENT COOLANT TO SEWER
4X PER YEAR

PRODUCT AND
SKELETONS (BRASS
FOIL RECLAIM)

REVISED TO REFLECT
1976-1984 PRACTICE.

TOLERANCES (EXCEPT AS NOTED)	KEMP ASSOCIATES	24 COVE CIRCLE MARION MA 0278	
DECIMAL ±	APPENDIX B	SCALE NTS	DRAWN BY
FRACTIONAL ±	TITLE WASTEWATER FLOW SCHEME - MODIFIED	APPROVED BY	
ANGULAR ±	DATE 11/10/92	DRAWING NUMBER	24035 C

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APPENDIX C

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION I

Information Request Waste Survey

Name of Respondent: TRUEX, INC

Respondent's Location: 300 ARMISTICE BLVD
PAWTUCKET, RI

Date: 9/15/00

Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month) (NO NOTICEABLE ODOR UNLESS NOTED)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
Acids <u>SULFURIC</u>	<u>LIQUID FREE FLOW DOWN SEWER</u>	<u>SULFURIC ACID H₂SO₄</u>	<u>150 GAL</u>	<u>SEWER ('76-'86)</u>
Adhesives <u>N/A</u>		(NOTE: IN 1985/1986 PRECIPITATION WASTEWATER TREATMENT SYSTEM WAS INSTALLED.)		
Asbestos <u>N/A</u>				
Adsorbents (from spills, leaks, etc.)	<u>DUMPSTER</u>	<u>"SPEND-DIZ" CLAY</u>	<u>250 LB: (MEMORY)</u>	<u>JOHNSON'S LANDFILL ('76-'86)</u>
Automotive Related Wastes:				
Antifreeze <u>N/A</u>		<u>NOTE 8</u>		
Batteries <u>N/A</u>		<u>LIQUID DISCHARGE TO SEWER</u>		
Brake Fluids <u>N/A</u>		<u>OF SPEND ACID, ALKALINE, HYDROGEN</u>		
Degreasers <u>N/A</u>		<u>PEROXIDE MIXTURE/COMPOUNDS</u>		
Lubricants <u>N/A</u>		<u>WAS A DIRTY GRAY/BLUE.</u>		

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Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
Oils LUBRICATING & DRAWING	FREE FLOW 55 GAL DRUM	PETROLEUM HYDROCARBON OIL	150 GAL MEMMORY (PURCH)	SEWER ('76-'83)
Oil Filters	55 GAL DRUM	"	150 GAL MEMMORY (PURCH)	VARIOUS RECYCLERS ('83-'86)
Transmission fluids NA				UNITED
other:				
Batteries NA				
Bleaches	FREE FLOW LIQUID	HYDROGEN PEROXIDE H ₂ O ₂	330 GAL	SEWER ('76-'86)
Caustics/Alkalis	FREE FLOW LIQUID	SODIUM HYDROXIDE NaOH	{ 250 GAL	"
Chemicals		OLEFO 444 L NaOH	{ 50 GAL	"
CHEMICALS Cleaning compounds or fluids	30 GALLON PAILS	CYANIDE	UNKNOWN	SEWER ('76-'79)
Coolants	FREE FLOW 30 GAL PANS	ELF COOL 5008 WATER SOLUBLE COOLANT	55 GAL	"
Degreasers COOLANT	5 GALLON PAILS	CIMSTAR 40	1. GAL	"
Disinfectants N/A				
Distillation Byproducts (Still Bottoms) N/A				
Dyes N/A				

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Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
Etching Solutions				
Filters N/A				
Flammable, Reactive, or Explosive Materials N/A				
Fungicides N/A				
Herbicides N/A				
Insecticides N/A				
Insulating/Fire Proofing Materials N/A				
Laboratory Wastes N/A				
Lubricants	SEE OILS			
Metals: (SKELETONS)	BRASS CDA 260	CARTRIDGE BRASS	36,000 lbs	RETURNED TO VENDOR FOR RECYCLING
grindings	55 GAL DRUM	70%CU, 30%ZN		176-86
powders				
shavings				
sludges				

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Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
solutions N/A				
other: N/A				
Paint and Coating Wastes: N/A				
paint N/A				
pigments N/A				
stripper "				
stains "				
thinner "				
turpentine "				
varnish "				
other: LACQUER	FREE FLOW LIQUID	ISOPROPANOL	30 GAL	SEWER ('76-'86)
PCBs (polychlorinated biphenyls) "				
Pesticides "				
Photocopying Wastes: "				

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	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	toners N/A				
	other: N/A				
	Photography Wastes:				
	developers N/A				
	fixers N/A				
	other: N/A				
	Plating Solutions N/A				
	Pretreatment Sludges/Solutions (sewage) N/A				
	Printing Wastes: N/A				
	inks N/A				
	dyes N/A				
	other: N/A				
	Rags, Used (Indicate prior use) N/A				
	Rodenticides N/A				

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	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO ₃ , Tetrahydrofuran/C ₄ H ₈ O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	Septic System Wastes ^{N/A}				
	Sludges ^{N/A}				
	Soldering Solutions ^{N/A}				
	Solutions of Polymers, resins, plastics ^{N/A}				
	Solvent Extracts ^{N/A}				
	Solvents ^{N/A}				
	Waste Oils ^{N/A}				
	Wood Preservatives ^{N/A}				
	Other: ^{N/A}				

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APPENDIX D

Name	Job Title	Duties	Performed Beginning	End	Current Position	Information Possessed
Jacobson	V.P	operation of Truex	1976	1979	unknown	chemicals purchased and waste disposal
Kantowitz	Plant Manager	operation of Truex	1980	1982	deceased	chemicals purchased and waste disposal
Dyer	General Manager	operation of Truex	1983	present	same	EHS and operation
Buchan	EHS/Quality	Environmental	1996	present	same	Environmental and records
Larocque	Maintenance	waste control	1976	present	same	bills of lading
Vaz	Plant Manager	operations	1995	present	same	chemicals purchased and waste disposal



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U.S. ENVIRONMENTAL PROTECTION AGENCY
DAVID J. NEWTON, RPM
NH & RI SUPERFUND SECTION
OFFICE OF SITE REMEDIATION & RESTORATION
1 CONGRESS ST. SUITE 1100
(MAIL CODE - HBO)
BOSTON MA
02114-2023

0648-0079